RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/553,904_

Source: _IFWP_

Date Processed by STIC: _3/8/07_

ENTERED

RAW SEQUENCE LISTING   DATE: 03/08/2007
PATENT APPLICATION: US/10/553,904   TIME: 12:25:22

Input Set : A:\53694131.APP
Output Set: N:\CRF4\03082007\J553904.raw

```
 3 <110> APPLICANT: BJORCK, LARS
 4        HERWALD, HEIKO
 5        MORGELIN, MATTHIAS
 6        RUSSELL, WAYNE
 7        NORRBY-TEGLUND, ANNA ,
 8        LINDBOM, LENNART
 9        SOLLENBERG, ULLA
10        CRAMER, HENNING
11        FLODGAARD, HANS
13 <120> TITLE OF INVENTION: METHOD FOR IDENTIFYING AN ANTI-STREPTOCOCCAL AGENT AND
14        ITS USE FOR TREATING STREPTOCOCCAL INFECTIONS
16 <130> FILE REFERENCE: 053694-0131
18 <140> CURRENT APPLICATION NUMBER: 10/553,904
19 <141> CURRENT FILING DATE: 2005-10-21
21 <150> PRIOR APPLICATION NUMBER: PCT/EP04/004429
22 <151> PRIOR FILING DATE: 2004-04-23
24 <150> PRIOR APPLICATION NUMBER: GB 0309246.7
25 <151> PRIOR FILING DATE: 2003-04-23
27 <150> PRIOR APPLICATION NUMBER: GB 0329112.7
28 <151> PRIOR FILING DATE: 2003-12-16
30 <160> NUMBER OF SEQ ID NOS: 11
32 <170> SOFTWARE: PatentIn Ver. 3.3
34 <210> SEQ ID NO: 1
35 <211> LENGTH: 484
36 <212> TYPE: PRT
37 <213> ORGANISM: Streptococcus pyogenes
39 <400> SEQUENCE: 1
40 Met Ala Lys Asn Asn Thr Asn Arg His Tyr Ser Leu Arg Lys Leu Lys
41  1               5                   10                  15
43 Thr Gly Thr Ala Ser Val Ala Val Ala Leu Thr Val Leu Gly Ala Gly
44              20                  25                  30
46 Phe Ala Asn Gln Thr Glu Val Lys Ala Asn Gly Asp Gly Asn Pro Arg
47          35                  40                  45
49 Glu Val Ile Glu Asp Leu Ala Ala Asn Asn Pro Ala Ile Gln Asn Ile
50      50                  55                  60
52 Arg Leu Arg Tyr Glu Asn Lys Asp Leu Lys Ala Arg Leu Glu Asn Ala
53  65                  70                  75                  80
55 Met Glu Val Ala Gly Arg Asp Phe Lys Arg Ala Glu Glu Leu Glu Lys
56              85                  90                  95
58 Ala Lys Gln Ala Leu Glu Asp Gln Arg Lys Asp Leu Glu Thr Lys Leu
59              100                 105                 110
61 Lys Glu Leu Gln Gln Asp Tyr Asp Leu Ala Lys Glu Ser Thr Ser Trp
62              115                 120                 125
```

```
            RAW SEQUENCE LISTING            DATE: 03/08/2007
            PATENT APPLICATION:  US/10/553,904    TIME: 12:25:22

            Input Set : A:\53694131.APP
            Output Set: N:\CRF4\03082007\J553904.raw


 64 Asp Arg Gln Arg Leu Glu Lys Glu Leu Glu Glu Lys Lys Glu Ala Leu
 65     130                 135                 140
 67 Glu Leu Ala Ile Asp Gln Ala Ser Arg Asp Tyr His Arg Ala Thr Ala
 68 145                 150                 155                 160
 70 Leu Glu Lys Glu Leu Glu Glu Lys Lys Lys Ala Leu Glu Leu Ala Ile
 71                 165                 170                 175
 73 Asp Gln Ala Ser Gln Asp Tyr Asn Arg Ala Asn Val Leu Glu Lys Glu
 74             180                 185                 190
 76 Leu Glu Thr Ile Thr Arg Glu Gln Glu Ile Asn Arg Asn Leu Leu Gly
 77         195                 200                 205
 79 Asn Ala Lys Leu Glu Leu Asp Gln Leu Ser Ser Glu Lys Glu Gln Leu
 80     210                 215                 220
 82 Thr Ile Glu Lys Ala Lys Leu Glu Glu Glu Lys Gln Ile Ser Asp Ala
 83 225                 230                 235                 240
 85 Ser Arg Gln Ser Leu Arg Arg Asp Leu Asp Ala Ser Arg Glu Ala Lys
 86             245                 250                 255
 88 Lys Gln Val Glu Lys Asp Leu Ala Asn Leu Thr Ala Glu Leu Asp Lys
 89             260                 265                 270
 91 Val Lys Glu Asp Lys Gln Ile Ser Asp Ala Ser Arg Gln Gly Leu Arg
 92         275                 280                 285
 94 Arg Asp Leu Asp Ala Ser Arg Glu Ala Lys Lys Gln Val Glu Lys Asp
 95     290                 295                 300
 97 Leu Ala Asn Leu Thr Ala Glu Leu Asp Lys Val Lys Glu Glu Lys Gln
 98 305                 310                 315                 320
100 Ile Ser Asp Ala Ser Arg Gln Gly Leu Arg Arg Asp Leu Asp Ala Ser
101                 325                 330                 335
103 Arg Glu Ala Lys Lys Gln Val Glu Lys Ala Leu Glu Glu Ala Asn Ser
104             340                 345                 350
106 Lys Leu Ala Ala Leu Glu Lys Leu Asn Lys Glu Leu Glu Glu Ser Lys
107         355                 360                 365
109 Lys Leu Thr Glu Lys Glu Lys Ala Glu Leu Gln Ala Lys Leu Glu Ala
110         370                 375                 380
112 Glu Ala Lys Ala Leu Lys Glu Gln Leu Ala Lys Gln Ala Glu Glu Leu
113 385                 390                 395                 400
115 Ala Lys Leu Arg Ala Gly Lys Ala Ser Asp Ser Gln Thr Pro Asp Thr
116             405                 410                 415
118 Lys Pro Gly Asn Lys Ala Val Pro Gly Lys Gly Gln Ala Pro Gln Ala
119             420                 425                 430
121 Gly Thr Lys Pro Asn Gln Asn Lys Ala Pro Met Lys Glu Thr Lys Arg
122         435                 440                 445
124 Gln Leu Pro Ser Thr Gly Glu Thr Ala Asn Pro Phe Phe Thr Ala Ala
125     450                 455                 460
127 Ala Leu Thr Val Met Ala Thr Ala Gly Val Ala Ala Val Val Lys Arg
128 465                 470                 475                 480
130 Lys Glu Glu Asn
134 <210> SEQ ID NO: 2
135 <211> LENGTH: 4
136 <212> TYPE: PRT
137 <213> ORGANISM: Artificial Sequence
```

```
139 <220> FEATURE:
140 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
141     peptide
143 <400> SEQUENCE: 2
144 Gly Pro Arg Pro
145  1
148 <210> SEQ ID NO: 3
149 <211> LENGTH: 4
150 <212> TYPE: PRT
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
155     peptide
157 <400> SEQUENCE: 3
158 Gly His Arg Pro
159  1
162 <210> SEQ ID NO: 4
163 <211> LENGTH: 13
164 <212> TYPE: DNA
165 <213> ORGANISM: Artificial Sequence
167 <220> FEATURE:
168 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
169     primer
171 <400> SEQUENCE: 4
172 gggttgttga gaa                                              13
175 <210> SEQ ID NO: 5
176 <211> LENGTH: 644
177 <212> TYPE: PRT
178 <213> ORGANISM: Homo sapiens
180 <400> SEQUENCE: 5
181 Met Phe Ser Met Arg Ile Val Cys Leu Val Leu Ser Val Val Gly Thr
182  1               5                  10                  15
184 Ala Trp Thr Ala Asp Ser Gly Glu Gly Asp Phe Leu Ala Glu Gly Gly
185             20                  25                  30
187 Gly Val Arg Gly Pro Arg Val Val Glu Arg His Gln Ser Ala Cys Lys
188         35                  40                  45
190 Asp Ser Asp Trp Pro Phe Cys Ser Asp Glu Asp Trp Asn Tyr Lys Cys
191     50                  55                  60
193 Pro Ser Gly Cys Arg Met Lys Gly Leu Ile Asp Glu Val Asn Gln Asp
194 65                  70                  75                  80
196 Phe Thr Asn Arg Ile Asn Lys Leu Lys Asn Ser Leu Phe Glu Tyr Gln
197                 85                  90                  95
199 Lys Asn Asn Lys Asp Ser His Ser Leu Thr Thr Asn Ile Met Glu Ile
200             100                 105                 110
202 Leu Arg Gly Asp Phe Ser Ser Ala Asn Asn Arg Asp Asn Thr Tyr Asn
203         115                 120                 125
205 Arg Val Ser Glu Asp Leu Arg Ser Arg Ile Glu Val Leu Lys Arg Lys
206     130                 135                 140
208 Val Ile Glu Lys Val Gln His Ile Gln Leu Leu Gln Lys Asn Val Arg
```

RAW SEQUENCE LISTING   DATE: 03/08/2007
PATENT APPLICATION: US/10/553,904   TIME: 12:25:22

Input Set : A:\53694131.APP
Output Set: N:\CRF4\03082007\J553904.raw

```
209 145                    150                    155                    160
211 Ala Gln Leu Val Asp Met Lys Arg Leu Glu Val Asp Ile Asp Ile Lys
212                    165                    170                    175
214 Ile Arg Ser Cys Arg Gly Ser Cys Ser Arg Ala Leu Ala Arg Glu Val
215                    180                    185                    190
217 Asp Leu Lys Asp Tyr Glu Asp Gln Gln Lys Gln Leu Glu Gln Val Ile
218                    195                    200                    205
220 Ala Lys Asp Leu Leu Pro Ser Arg Asp Arg Gln His Leu Pro Leu Ile
221       210                    215                    220
223 Lys Met Lys Pro Val Pro Asp Leu Val Pro Gly Asn Phe Lys Ser Gln
224 225                    230                    235                    240
226 Leu Gln Lys Val Pro Pro Glu Trp Lys Ala Leu Thr Asp Met Pro Gln
227                    245                    250                    255
229 Met Arg Met Glu Leu Glu Arg Pro Gly Gly Asn Glu Ile Thr Arg Gly
230                    260                    265                    270
232 Gly Ser Thr Ser Tyr Gly Thr Gly Ser Glu Thr Glu Ser Pro Arg Asn
233                    275                    280                    285
235 Pro Ser Ser Ala Gly Ser Trp Asn Ser Gly Ser Ser Gly Pro Gly Ser
236       290                    295                    300
238 Thr Gly Asn Arg Asn Pro Gly Ser Ser Gly Thr Gly Gly Thr Ala Thr
239 305                    310                    315                    320
241 Trp Lys Pro Gly Ser Ser Gly Pro Gly Ser Thr Gly Ser Trp Asn Ser
242                    325                    330                    335
244 Gly Ser Ser Gly Thr Gly Ser Thr Gly Asn Gln Asn Pro Gly Ser Pro
245                    340                    345                    350
247 Arg Pro Gly Ser Thr Gly Thr Trp Asn Pro Gly Ser Ser Glu Arg Gly
248       355                    360                    365
250 Ser Ala Gly His Trp Thr Ser Glu Ser Ser Val Ser Gly Ser Thr Gly
251       370                    375                    380
253 Gln Trp His Ser Glu Ser Gly Ser Phe Arg Pro Asp Ser Pro Gly Ser
254 385                    390                    395                    400
256 Gly Asn Ala Arg Pro Asn Asn Pro Asp Trp Gly Thr Phe Glu Glu Val
257                    405                    410                    415
259 Ser Gly Asn Val Ser Pro Gly Thr Arg Arg Glu Tyr His Thr Glu Lys
260                    420                    425                    430
262 Leu Val Thr Ser Lys Gly Asp Lys Glu Leu Arg Thr Gly Lys Glu Lys
263       435                    440                    445
265 Val Thr Ser Gly Ser Thr Thr Thr Thr Arg Arg Ser Cys Ser Lys Thr
266       450                    455                    460
268 Val Thr Lys Thr Val Ile Gly Pro Asp Gly His Lys Glu Val Thr Lys
269 465                    470                    475                    480
271 Glu Val Val Thr Ser Glu Asp Gly Ser Asp Cys Pro Glu Ala Met Asp
272                    485                    490                    495
274 Leu Gly Thr Leu Ser Gly Ile Gly Thr Leu Asp Gly Phe Arg His Arg
275       500                    505                    510
277 His Pro Asp Glu Ala Ala Phe Phe Asp Thr Ala Ser Thr Gly Lys Thr
278       515                    520                    525
280 Phe Pro Gly Phe Phe Ser Pro Met Leu Gly Glu Phe Val Ser Glu Thr
281       530                    535                    540
```

```
283 Glu Ser Arg Gly Ser Glu Ser Gly Ile Phe Thr Asn Thr Lys Glu Ser
284 545                 550                 555                 560
286 Ser Ser His His Pro Gly Ile Ala Glu Phe Pro Ser Arg Gly Lys Ser
287             565                 570                 575
289 Ser Ser Tyr Ser Lys Gln Phe Thr Ser Ser Thr Ser Tyr Asn Arg Gly
290             580                 585                 590
292 Asp Ser Thr Phe Glu Ser Lys Ser Tyr Lys Met Ala Asp Glu Ala Gly
293             595                 600                 605
295 Ser Glu Ala Asp His Glu Gly Thr His Ser Thr Lys Arg Gly His Ala
296         610                 615                 620
298 Lys Ser Arg Pro Val Arg Gly Ile His Thr Ser Pro Leu Gly Lys Pro
299 625                 630                 635                 640
301 Ser Leu Ser Pro
305 <210> SEQ ID NO: 6
306 <211> LENGTH: 491
307 <212> TYPE: PRT
308 <213> ORGANISM: Homo sapiens
310 <400> SEQUENCE: 6
311 Met Lys Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys
312  1               5                  10                  15
314 His Leu Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
315             20                  25                  30
317 Val Asn Asp Asn Glu Glu Gly Phe Phe Ser Ala Arg Gly His Arg Pro
318         35                  40                  45
320 Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
321     50                  55                  60
323 Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
324 65                  70                  75                  80
326 Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
327             85                  90                  95
329 His Ala Asp Pro Asp Leu Gly Val Leu Cys Pro Thr Gly Cys Gln Leu
330             100                 105                 110
332 Gln Glu Ala Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp
333         115                 120                 125
335 Glu Leu Asn Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser
336     130                 135                 140
338 Phe Gln Tyr Met Tyr Leu Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys
339 145                 150                 155                 160
341 Gln Val Lys Asp Asn Glu Asn Val Val Asn Glu Tyr Ser Ser Glu Leu
342             165                 170                 175
344 Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser Asn Ile Pro
345             180                 185                 190
347 Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu Arg Ser Lys
348             195                 200                 205
350 Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu Tyr Cys Arg
351     210                 215                 220
353 Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser Gly Lys Glu
354 225                 230                 235                 240
356 Cys Glu Glu Ile Ile Arg Lys Gly Gly Glu Thr Ser Glu Met Tyr Leu
```

VERIFICATION SUMMARY   DATE: 03/08/2007
PATENT APPLICATION: US/10/553,904   TIME: 12:25:23

Input Set : A:\53694131.APP
Output Set: N:\CRF4\03082007\J553904.raw